

## Patent Abstracts of Japan

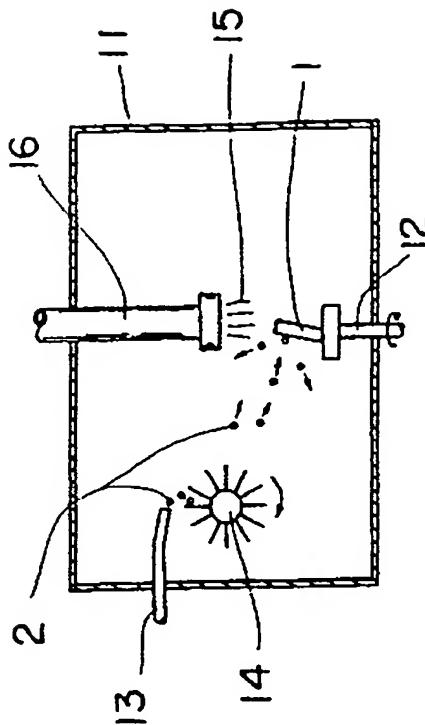
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TITLE : SHOT PEENING METHOD



**ABSTRACT :** **PURPOSE:** To sharply improve fatigue strength by executing shot peening while cooling a steel-made member containing residual austenite in the range of the specific temp. range to develop much residual compressive stress on the surface layer of the steel-made member.

**CONSTITUTION:** The member 1 of alloy steel, etc., containing the residual austenite, which martensitic transformation starting point (Ms point) of Cr steel, Cr/Mo steel, Ni-Cr-Mo steel, etc., is at the room temp. or less, is fitted on the rotating table 12 in the shot peening chamber 11. CO<sub>2</sub> gas 15 cooled at for example -50°C, is supplied from cooling gas supplying tube 16 and while cooling the steel member 1 on the rotating table 12 in the temp. range from Ms point to room temp., the shot peening is executed to the surface of the steel member 1 with a high speed rotating body 14 by using the shot 2 composing of the small diameter steel ball, etc., sent from the supplying pipe 13, to develop the residual compressive stress to deep position from the surface of the steel member 1, and the fatigue strength is sharply improved.

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